



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/696,989	10/26/2000	John Philip Holden	00216-519001	3295

26161 7590 06/25/2003

FISH & RICHARDSON PC
225 FRANKLIN ST
BOSTON, MA 02110

[REDACTED] EXAMINER

SHIPSIDES, GEOFFREY P

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

1732

DATE MAILED: 06/25/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/696,989	HOLDEN ET AL.
	Examiner	Art Unit
	Geoffrey P. Shipsides	1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 22 May 2003.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-11 and 15-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-11 and 15-17 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. ____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) Other: _____

DETAILED ACTION

Claim Objections

1. Claims 1, 2, and 4 are objected to because of the following informalities: lines 9-10 of instant claim 1 include what appears to be the language of claim 2 and it is the examiner assertion that this is a typographically error. Claim 2 is also objected to because it does not end with a period ("."). Claim 4 is objected to because the word "an" on line 1 should be deleted and replaced with --of said solid--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,609,890 (Boucherie) in view of U.S. Patent No. 4,876,915 (Iuchi), U.S. Patent No. 5,027,511 (Miller), and U.S. Patent No. 6,108,869 (Meessmann et al.).

Boucherie teaches molding process with the use of a molding machine for molding toothbrushes (Title and Abstract). Boucherie teaches a method of molding

toothbrush bodies from at least two different materials (Column 1, lines 63-64).

Boucherie teaches a molding machine where each mold cavity is defined by relatively movable mold parts (Column 2, lines 9-10). Boucherie teaches the use of a rotating toothbrush carrier that carries the unfinished toothbrush parts from station to station where subsequent insert molding processes are performed (Figures). Boucherie teaches that the mold insert parts 28 are engaged in the recesses 26 of the mold blocks 20, and the mold cavities 20a are closed by lowering corresponding movable mold parts (not shown) until they abut the stationary mold blocks 20 (Column 4, lines 15-20).

With regard to claim 1, Boucherie does not specifically teach the use of this method to produce shaving razor handles. Shaving razor handles are, however, well known in the art and, as can be seen in Miller, have a similar function to that of a toothbrush handle. Both shaving razor handles and toothbrush handles are gripped by a user's hand for the application of the device to the user's face and thus both devices constitute analogous art. It would have been obvious to one having ordinary skill in the art at the time of invention to use the process of Boucherie to also produce shaving razor handles as shaving razor handles in order to provide an efficient means of making shaving razor handles.

Boucherie also does not teach the molding of a solid inner core that is purely internal with no visible external portions. Iuchi, however, teaches the prior art use of resinous inserts in the production of steering wheels in order to reduce the huge material costs associated with the covering material (Column 1, lines 20-32). These resinous inserts were completely covered by the covering material. It is noted that a

Art Unit: 1732

steering wheel constitutes analogous art to a toothbrush or shaving razor handle, as all of these consumer articles are hand gripped and are made of resinous materials. It would have been obvious to one having ordinary skill in the art at the time of invention to modify the process of Boucherie to include the placement of an internal insert (inner core) that is made of lower cost material into the center of the handle in order to reduce the material cost of the production of a tooth brush or shaving razor handle. It would have been further obvious to one having ordinary skill in the art to produce that core in an additional molding step in the process of Boucherie as the process of Boucherie is set up for sequential molding steps in order to retain the advantages of the basic teaching of Boucherie.

Boucherie also does not specifically teach that the final molding step forms an elastomeric grip portion onto the external surface of the handle. Miller teaches a gripping structure on the outside of the handle (Figures; Abstract) and teaches the use of elastomeric material (Column 1, line 31). Meessmann et al. teaches a toothbrush with an elastomeric grip (Figures; Column 3, lines 46-50). It would have been obvious to one having ordinary skill at the time of invention to use the production method of Boucherie to apply a final elastomeric grip portion as taught by Miller and Meessmann et al. on to a shaving razor handle in order to provide an efficient means of gripping the formed shaving razor handle.

It is further intrinsic that the inner core is solid as it is not a liquid or a gas.

With regard to claims 2 and 3, it is well known in the art that pigment (which is to be added to color a polymer) constitutes an added material cost in the manufacture of

plastic articles. It is further well known that material compatibility is an important issue in the production of composite articles. It would have been obvious to one having ordinary skill in the art at the time of invention to produce the inner core layer as taught by Iuchi in the production method as taught by Boucherie out of the same (but unpigmented) material as the second layer that is externally visible in order to save pigment material costs in a process that produces a product of the same visual quality. It would have been further obvious to one having ordinary skill in the art at the time of invention to use the same material for each layer in order to ensure that the material layers are compatible in order to ensure that the materials form a well-connected structure.

With regard to claims 4 and 5, Boucherie teaches the use of a mold member that holds the end of the brush in the molding operations (Figure 2, ref. No. 28) and this member engages the brush and thus constitutes an engagement member. Boucherie also teaches the movement of the brush from one station to the next to be placed into different mold cavities prior to the molding of the outer portion of the toothbrush handle. It would have been obvious to one having ordinary skill in the art at the time of invention to use this process of Boucherie even when producing a razor handle and even when producing multiple layers of a handle in order to increase the production speed of the handle.

With regard to claims 6-8, Boucherie teaches the molding of multiple parts in each injection cycle (Figure 1).

With regard to claim 9, it is well known in the art of razor handles that razor blades are attached to cartridges that are attachable and detachable from razor handles and that these cartridges have a shape that fits snugly into the end of the razor handle. It would have been obvious to one having ordinary skill in the art at the time of invention to modify the process of Boucherie to have an engagement member that is shaped similarly to the shape of a cartridge connector so that when producing razor handles by the process of Boucherie that the produced handle would have a shape that will lock in place with a cartridge and to then attach the cartridge to the end of the razor handle after the production of the razor handle.

4. Claims 10 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,609,890 (Boucherie) in view of U.S. Patent No. 4,876,915 (Iuchi), U.S. Patent No. 5,027,511 (Miller), and U.S. Patent No. 6,108,869 (Meessmann et al.) as applied to claims 1-3 and 6-8 above, and further in view of Japanese Patent No. JP-61261014-A (Yamada).

With regard to claims 10 and 11, Boucherie does not specifically teach the molding of an inner core with a hole passing therethrough for passing molten plastic through in the molding of the second shot. Yamada and Meessmann et al., however, do teach the molding of handles of multiple materials where a first formed part has a hole therethrough in which material passes through. Yamada teaches a decorative handle of multiple colors where a first part is molded with holes passing therethrough and the molding of material through these holes to form the second colored section at different places along the body of the handle (Figures 6 and 8). The method as taught

by Yamada constitutes the placing of a first formed part with through holes into a mold where material passes from a first side surface of the first formed part to a second side surface of the first formed part. The first side of the first formed part of Yamada is held against the mold surface while plastic material flows to the second side. Meessmann et al. also teaches a first formed part with a through hole formed (Figures 7 and 9).

Meessmann et al. teaches that the handle member 12 is generally manufactured of a thermoplastic material, such as polypropylene (Column 3, lines 45-46). Meessmann et al. further teaches that an elongated opening 20 is provided at the opposite end of the handle member 12 from that of the bristles 14 and, as with the slotted openings 18, the material from the gripping element 16 is injected into the slotted opening 20 and aids in retaining that portion of the gripping element 16 onto the handle member 12 (Column 3, lines 62-67). The gripping element is formed on sides of the toothbrush handle (Figure 3). Wright also does not exclude the use of a through hole in the production of a multi-colored handle and the drawing of Figure 4 seems to teach the use of a through hole in the molding of different colored sections of the handle. It would have been obvious to one having ordinary skill in the art at the time of invention to modify the process of Boucherie in view of Iuchi to include an internal passage (or through holes) as taught by Meessmann et al. and Yamada in order to allow for the passage of the second shot material into separated surface area portions of the handle body without the use of multiple injection points. It would have been further obvious to one having ordinary skill in the art to do this in order to provide an interlocking relationship between the two different molded portions of the handle thereby increasing the bond strength between

the materials. It would have been further obvious to one having ordinary skill in the art at the time of invention to inject the material at a position along the handle where the through hole exists in order to facilitate the passage of material through the through hole as taught by Yamada. It would have been further obvious to one having ordinary skill in the art at the time of invention to have a mold tool that holds the first side of the first molded part against the point of injection to further ensure the passage of the material through the through hole.

5. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,609,890 (Boucherie) in view of U.S. Patent No. 5,573,791 (Marcus), U.S. Patent No. 5,027,511 (Miller), and U.S. Patent No. 6,108,869 (Meessmann et al.).

Boucherie teaches molding process with the use of a molding machine for molding toothbrushes (Title and Abstract). Boucherie teaches a method of molding toothbrush bodies from at least two different materials (Column 1, lines 63-64). Boucherie teaches a molding machine where each mold cavity is defined by relatively movable mold parts (Column 2, lines 9-10). Boucherie teaches the use of a rotating toothbrush carrier that carries the unfinished toothbrush parts from station to station where subsequent insert molding processes are performed (Figures). Boucherie teaches that the mold insert parts 28 are engaged in the recesses 26 of the mold blocks 20, and the mold cavities 20a are closed by lowering corresponding movable mold parts (not shown) until they abut the stationary mold blocks 20 (Column 4, lines 15-20).

With regard to claim 15, Boucherie does not specifically teach the use of this method to produce shaving razor handles. Shaving razor handles are, however, well

known in the art and, as can be seen in Miller, have a similar function to that of a toothbrush handle. Both shaving razor handles and toothbrush handles are gripped by a user's hand for the application of the device to the user's face and thus both devices constitute analogous art. It would have been obvious to one having ordinary skill in the art at the time of invention to use the process of Boucherie to also produce shaving razor handles as shaving razor handles in order to provide an efficient means of making shaving razor handles.

Boucherie does not specifically teach the molding of an inner core and an outer portion where the inner core and the outer portion have the same visual appearance. Marcus teaches a method speeding up the production rate of a molded article by molding the article in a series of layers in a series of injection molding stations so that each layer can be cooled in a relatively short period of time thereby optimizing production rates. Marcus further teaches that each layer can be of the same or different resins. (Column 1, lines 51-60). It would have been obvious to one having ordinary skill at the time of invention to modify the process of Boucherie to mold a series of layers (as opposed to a single first layer) as taught by Marcus in order to speed up the production process of Boucherie. Marcus teaches a process that solves the same technical difficulty as Boucherie as both deal with sequential injection molding steps to produce a layered article.

Boucherie also does not specifically teach that the final molding step forms an elastomeric grip portion onto the external surface of the handle. Miller teaches a gripping structure on the outside of the handle (Figures; Abstract) and teaches the use

Art Unit: 1732

of elastomeric material (Column 1, line 31). Meessmann et al. teaches a toothbrush with an elastomeric grip (Figures; Column 3, lines 46-50). It would have been obvious to one having ordinary skill at the time of invention to use the production method of Boucherie to apply a final elastomeric grip portion as taught by Miller and Meessmann et al. on to a shaving razor handle in order to provide an efficient means of gripping the formed shaving razor handle.

It is further intrinsic that the inner core is solid as it is not a liquid or a gas.

With regard to claim 16, it is well known in the art to make consumer articles out of clear material for a decorative design. It would have been obvious to one having ordinary skill in the art at the time of invention to produce a decorative shaving razor handle by the process as taught by Boucherie in view of Marcus with the use of the same clear resin in order to provide a decorative shaving razor handle at a lower cost.

With regard to claim 17, it is intrinsic in the process of Boucherie that the outer portion of the formed handle has a texture.

Response to Arguments

Applicant's arguments with respect to claims 1-11 and 15-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey P. Shipsides whose telephone number is 703-306-0311. The examiner can normally be reached on Monday - Friday 9 AM till 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard D Crispino can be reached on 703-308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Geoffrey P. Shipsides/gps
June 20, 2003


MARK EASHOO, PH.D
PRIMARY EXAMINER

Art Unit 1732
21/Jun/03